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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,469

03/21/2005

David Dingwall

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07/31/2006

INTELLECTUAL PROPERTY / TECHNOLOGY LAW

PO BOX 14329

RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

REESE, DAVID C

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/528,469

Applicant(s)

DINGWALL, DAVID

Examiner

David C. Reese

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12, 13, 16, 20, 21, 31-36, 39 and 40 is/are rejected.
- 7) ☒ Claim(s) 6-11, 14, 15, 17-19, 22-26, 29, 30, 37 and 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

- Claims 27-28 are withdrawn (see below).
- Claims 1-40 are pending.

Election/Restrictions

[1] Claims 27-28 are withdrawn by examiner from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Though applicant stated in the reply that all claims are readable upon the elected species, the examiner disagrees and refers applicant to claims 27-28 which claim subject matter from figures 8-9; figures of which are from a species not elected in the restriction requirement. Applicant timely did not traverse the restriction (election) requirement in the reply filed on 5/18/2006; so therefore, the election is treated as an election without traverse.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

[2] Claim 5 is objected to because of the following informalities: It is stated in the instant claim that "one of said components includes a first formation". The examiner interprets the first formation in this case as the resilient member labeled as 15 in the disclosed diagrams. The resilient member, however, as disclosed, is placed within the passage of said component, and thus, due to such placement, one would not consider the resilient member to be "a first formation" of said component. It apparently is a different entity, separate from the component. Thus, the use of the word, "formation" may need to be changed (or removed) for more appropriate definiteness.

Further, the examiner believes that the use of the word, "second formation" from claim 5 and the proceeding claims may be repetitive and unnecessary. Consider changing the latter half of claim 5 to read as follows: "and the pin is configured for engagement with the first formation [retainer] when the pin is in the locked position." Thus, in claim 6, "wherein the pin is of generally cylindrical shape and includes a pair of spaced walls at least partly defining a circumferentially extending slot..." The examiner recommends removing the term "second formation" as shown above (in all of the submitted claims), just using the pin as its primary reference point.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

[4] The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

[5] Claim 20 recites the limitation "the particular" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

[6] Claims 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, as described in the preceding claims, the examiner interpreted the use of the term, "first formation" to correspond to the retaining element submitted within one of the claimed components. With the addition of claim 21, however, it becomes both unclear and indefinite since the applicant attempts to claim a retaining element to said particular component, when claim 21 is dependent upon a claim (claim 5) that has already attempted to claim the retaining member via the use of a different name [first formation]. The terms

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“retaining element, “ elastomeric support, “engagement element,” “resilient means,” and especially “first formation” all require better definiteness, not only in the instant claim, but also due to their use and dependencies from other claims (i.e. first formation).

Claim Rejections - 35 USC § 102

[7] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[8] Claims 1-5, 12-13, 16, 31-36, and 39-40 are rejected under 35 U.S.C. 102(b) as clearly anticipated by Robinson et al., US-5,983,534, because the invention was patented or described in a printed publication in this or a foreign country, or in public use or on sale in this country more than one (1) year prior to the application for patent in the United States.

The shape and appearance of Robinson et al. is identical in all material respects to that of the claimed design, *Hupp v. Siroflex of America Inc.*, 122 F.3d 1456, 43 USPQ2d 1887 (Fed. Cir. 1997).

As for Claim 1, Robinson et al. discloses of an apparatus including:

a first component (16) defining a first passage (14);

a second component (20) connectable with the first component and defining a second passage (12), said passages (12, 14, see Fig. 3) being aligned when the components (16, 20) are connected to each other (Fig. 3);

a locking pin (10) configured for being accommodated in the aligned passages (12, 14) thereby to prevent separation of the components (16, 20), the pin (10) being rotatable, when so accommodated, relative to the components (16, 20), between

a locked position in which the pin (10) engages at least one of the components (16, 20) to prevent withdrawal of the pin (10) from the aligned passages (12, 14), and

a free position in which the pin (10) is slidably removable from the aligned passages (12, 14) to permit separation of the components (16, 20).

Re: Claim 2, configured such that when the first component (16) and second component (20) are connected to each other, they can substantially only be separated by effecting relative movement of the components (16, 20) in opposite disengagement directions, and wherein the extending of the pin (10) from the first passage (14) into the second passage (12) prevents said relative movement in said disengagement directions.

Re: Claim 3, configured such that the pin (10), when accommodated in said aligned passages (12, 14), extends in a direction non-parallel to said disengagement directions.

Re: Claim 4, configured such that the pin (10), when accommodated in said aligned passages, extends in a direction substantially perpendicular to said disengagement directions.

Re: Claim 5, wherein one of said components (16, 20) includes a first formation (44 or 30), and the pin (10) has a second formation (68 or 66 respectively) configured for engagement with the first formation (44 or 30) when the pin (10) is in the locked position (see Fig. 3).

Re: Claim 12, wherein the pin (10) has therein an insertion recess (vertical hole through which 68 is inserted) extending, longitudinal relative to the pin (10), to at least a first end of the pin (10), the insertion recess being configured to accommodate the first formation (44) to permit insertion of the pin into said aligned passages (12, 14) when the insertion recess is aligned with said first formation (16) (See Fig. 8).

Re: Claim 13, wherein the insertion recess (vertical hole through which 68 is inserted) extends to the first end of the pin (top of 10) but terminates at a position spaced from an opposite, second end of the pin (bottom of 10).

Re: Claim 16, wherein the passage of one of the components is closed at one end such that said aligned passages (12, 14) are closed at one end.

Re: Claim 31, wherein the first (16) and second (20) components are machinery components, the first component (16) being a wear-component configured to wear in use, and the second component (20) is configured to support the first component (16).

Re: Claim 32, wherein the first (16) component and second (20) component are components of earth moving equipment.

Re: Claim 33, wherein the first (16) component and the second (20) component are a tooth and adaptor, respectively, of earth moving equipment, the adaptor being configured to mount the tooth to an earth moving bucket.

Re: Claim 34, wherein the first (16) component and the second (20) component are a shroud and adaptor, respectively, of earth moving equipment, the adaptor being configured to mount the shroud to an earth moving bucket.

Re: Claim 35, wherein the first component (16) is one of tooth and shroud, and the second component (20) is a lip of an earth moving bucket.

Re: Claim 36, wherein the pin (10) includes a non-circular formation (70) at the end of the pin (10) for engagement with a rotatable tool to effect rotation of the pin (10) between the free and locked positions.

As for Claim 39, Robinson et al. discloses of method of releasably interlocking a first component (16) and a second (20) component, wherein the first (16) component defines a first passage (14) and the second (20) component defines a second passage (12), the method including the steps of:

connecting the first component (16) to the second (20) component so that the first (16) and second (20) passages are aligned with each other;

inserting a pin (10) into the aligned passages (12, 14) so that, when so inserted, the pin (10) is in a free position in which it is free to be selectively withdrawn from the aligned passages (12, 14);

rotating the pin (10) relative to the components (16, 20), from the free position to a locked position in which the pin (10) engages at least one of the components (16, 20) to prevent withdrawal of the pin (10) from the aligned passages (12, 14) and hence to prevent separation of the components (16, 20).

Re: Claim 40, wherein the step of connecting the first (16) component to the second (20) component includes connecting the components (16, 20) such that they can substantially only be separated by effecting relative movement of the components (16, 20) in opposite disengagement directions, and the step of inserting the pin (10) includes inserting the pin (10) such that, when

the pin (10) extends from the first passage (14) into the second (12) passage, the pin (10) prevents said relative movement in said disengagement directions.

Allowable Subject Matter

[9] Claims 6-11, 14-15, 17-26, 29-30, 37-38 are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As for Claim 6, the prior art, incorporating other corresponding limitations as set forth above, does not teach of the second formation [of the pin] having a pair of space walls at least partly defining a circumferentially extending slot in the pin, so that in use, the first formation [the retaining member] enters the slot as the pin is rotated from a free to a locked position. Claims 7-11 are dependent upon claim 6.

As for Claim 14, the prior art, incorporating other corresponding limitations as set forth above, does not teach of a withdrawal recess extending longitudinally relative to the pin, permitting withdrawal of the pin in a first direction. Claim 15 is dependent upon Claim 14.

As for Claim 17, the prior art, incorporating other corresponding limitations as set forth above, does not teach of a resilient element in that passage immediately adjacent the one closed end, wherein the pin is configured to abut against the resilient element.

As for Claim 18, the prior art, incorporating other corresponding limitations as set forth above, does not teach of a one of said components including two coaxial spaced-apart sub passage.

As for Claim 19, the prior art, incorporating other corresponding limitations as set forth above, does not teach of wherein the first formation [resilient member] is resiliently movable

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under a force exerted by the pin when the pin is rotated from said free position to said locked position. Claims 20-26, 29-30 are dependent upon Claim 19, but however, claims 20-21 have additional issues that need proper resolve (see above 112 rejections).

As for Claim 37, the prior art, incorporating other corresponding limitations as set forth above, does not teach of an aperture permitting the insertion of a pin-removal tool into a cavity, said cavity at one end of said pin. Claim 38 is dependent from claim 37.

Conclusion

[10] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited further to show the state of the art with respect to this particular type of fastening system; as well as their extreme relevance to the current application as many read extensively onto the claimed invention: please see submitted notice of reference cited.

[11] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached at (571) 272-7075. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

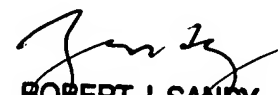
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DCR

David Reese
Assistant Examiner
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7/24/06



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